

THE METAL INDUSTRY

WITH WHICH ARE INCORPORATED
THE ALUMINUM WORLD: COPPER AND BRASS: THE BRASS FOUNDER AND FINISHER
ELECTRO-PLATERS REVIEW

Volume 26

JANUARY—DECEMBER, 1928

THE METAL INDUSTRY PUBLISHING COMPANY
NEW YORK

ARTICLES MARKED (*) ARE ILLUSTRATED

*140 Years Old, A Plating Equipment Company.	463
1927, Aluminum in	21
*1927, Outlook for 1928, Progress of Metals in	19
1927, Review of the Silver Market for	81
*1928, Progress of Metals in 1927; Outlook for	19

ARTICLES

A

Acid, Use of Cadmium in	168
Acidity of the Solution, Nickel Anodes and the	350
Additions, Nickel Solution	13
*Advancement, Electric Smelting	11, 68, 116
Agent's Viewpoint, Sales Ethics from a Purchasing	100
*Airships Use Aluminum Alloy Construction, Giant	18
*Alloy Construction, Giant Airships Use Aluminum	18
Alloy for Mill Bearings	163
Alloy Gas Valves, Zinc	406
Alloy, New German Aluminum	18
*Alloys, Aluminum	432
Alloys, Analysis of Zinc	340
Alloys, Die Casting	349
Alloys, Electroplating on Aluminum and Its	261, 313
Alloys, Methods of Joining Aluminum and Its	388
Alloys, Nickel on Zinc	9
Alloys, Nickel on Zinc	65
Alloys, Smelting Secondary Aluminum and Aluminum	347
*Aluminum Alloy Construction, Giant Airships Use	18
Aluminum Alloy, New German	18
*Aluminum Alloys	432
Aluminum Alloys, Smelting Secondary Aluminum and	347
Aluminum and Aluminum Alloys, Smelting Secondary	347
Aluminum and Its Alloys, Electroplating on	261, 313
Aluminum and Its Alloys, Methods of Joining	388
Aluminum Bronze	6
Aluminum Castings, Nickel on Zinc	164
Aluminum Castings, Welding	205
Aluminum, Colored	31
*Aluminum, Electrodeposition of	518
Aluminum in 1927	21
*Aluminum Industry, The Development of the	114, 157, 217
Aluminum in Transportation, the Future of	218
Aluminum, Oxidizing Brass and	356
Aluminum Perfected, Electrodeposition of	383
Aluminum, Refining Scrap	344
Aluminum, Satin Finish on Cast	356
Aluminum, Solder or Bronze for	65
Aluminum to Resist Soap Solution	474
Aluminum Utensils, Standardization of	82
*American Electroplaters' Society, Annual Meeting of the	297
*American Foundrymen's Meeting in Philadelphia	265
Ammeter, Rheostat, Voltmeter	437, 478
Analysis of Zinc Alloys	340
*Ancient Silver Globe Brought Here	215
Annealing of Metals in the Electric Furnace	304
*Anniversary, Our Twenty-fifth	37
Announcement	39
Annual Convention, Impressions of the	303
*Annual Meeting of the American Electroplaters' Society	297
*Annual Meeting of the Institute of Metals Division	107
Annual Meeting of Newark Electroplaters	216
Anodes and the Acidity of the Solution, Nickel	350
Anodes for Chromium Plating	435
*Anodes for Chromium Plating, Steel	520
Another, What One Foundryman Thinks of	339
Antarctic, Metals Going to	469
*Applied X-Rays in the Metal Industry	271
*Architect, the Artisan and Bronze, The	66
Arsenic with Tin, Mixing	466
Arsenical Copper Research	17
*Artisan and Bronze, The Architect the	66
*Auto Chassis, Gold Plated	78
Automobile, Chromium Plated	385
Award Prize, British to	17

B

Babbitt Metal, Treating Old	208
Babbitt, Removing Lead from	117
Babbitts Brass Castings	210
Baking of Cores, To Study Proper	308
Banquet and Session, Bridgeport Branch Holds	214
Bars, Steel Bus	521
Battery Plates	67
Baume Chart	482
*Bearing Metals and Tin Solders from Scrap Metals, The Production of White	394, 472, 513
Bearings, Alloy for Mill	163
Belt Grinding	10
Beryllium, Depositing	9
*Billhuth of an Inch, Measuring a	272
Binders for Foundry Cores, Rubber	470, 511
Black Deposit on Steel	400
Black Finish for Hardware	396
Black, Smut Green and	398
Blue Finish on Steel	356
*Bosse Process of Chromium Plating, The	28

Branch Holds Banquet and Session, Bridgeport	214
Brass and Aluminum, Oxidizing	356
Brass and Copper Company, A Message from the Chase	32
*Brass and Copper Fabricating Industry, The	32
Brass and Silver, Colonial	167
Brass Castings, Babbitting	210
Brass Castings, Dross Spots in	163
Brass Castings, Reclaiming	213
Brass Castings, Smooth	306
Brass Castings, Spots in	156
Brass Castings, The Reclamation of Defective	10
Brass Finishing, Changes in	13
*Brass Foundry Practice, The Fundamentals of	118, 208, 341, 390, 517
*Brass Goods, Illuminated Display of	391
Brass Impurities in	349
Brass Plate, Oxidizing Solution for	435
Brass Plate, Spotting Out on	400
Brass Rolling Mill Progress	4
Brass Solution, Mechanical	13
Brass Stops or Faucets, Grinding in	208
Brass Strips, Buffing	167
Brass Wire, Standards for	307
Brasswork a New Industry, Plumbers'	257
Brass Working in India	251
Braze for Aluminum, Solder or	65
Brazing Compound	208
*Brazing, Rapid	123
Bridgeport Branch Holds Banquet and Session	214
*Brigade, The Charge of the Light	316
British Institute of Metals	159
British Institute of Metals Meeting	429
British to Award Prize	17
Brittleness and Stains in Nickel, Preventing	170
Bronze, Aluminum	6
Bronze, Cleansing and Coloring	435
Bronze, Manganese	5
*Bronze Safety Trophy, Silver and	5
*Bronze, The Architect, the Artisan and	66
Bronze Wire, Pickle for	65
Buckle Finish, Cut Steel	439
Buffing Brass Strip	107
Buffing for Chromium Plating, Polishing and	253
Bus Bars, Steel	521

C

Cable Covers, Expanding Use of Tin in	466
Cadmium from Dross, Reclaiming	310
Cadmium in Acid, Use of	168
Cadmium Plate, Soldering on	65
*Cadmium Plating in Quantity Production	252
*Cadmium Plating in Quantity Production	475
Cadmium Solutions, Palladium and	356
Calcined Soot	510
*Car, A Sterling Silver Trolley	263
*Carillon Clock for University of Louvain, New	201
Cast Aluminum, Satin Finish on	356
Cast Metals, The Stain Spotting of	397
Casting Alloys, Die	349
*Casting, Die	7
Casting Duralumin, Die	474
Casting Plates	307
Castings, Babbitting Brass	210
Castings, Data on Soft Metal	310
Castings, Dross Spots in Brass	163
Castings, Mixture for Slush	431
Castings, Nickel on Zinc-Aluminum	164
Castings, Reclaiming Brass	213
Castings, Sandy	255
Castings, Smooth Brass	306
Castings, Spots in Brass	156
Castings, The Reclamation of Defective Brass	10
Castings, Tinning Iron	255
Castings, Welding Aluminum	205
Cathode on the Electrodeposition of Chromium, Influence of the	354
*Centennial Chandelier, A	516
*Chandellier, A Centennial	516
Changes in Brass Finishing	13
*Charge of the Light Brigade, The	316
Chart, Baume	482
Chase Brass and Copper Company, A Message from the	32
*Chassis, Gold Plated Auto	78
*Chemists Discuss Research, Platers and	165
Chloride in Nickel Solution, Excessive	353
Chloride Solution, Chromium	170
*Chromium, An Old Plating Firm Takes Up	381
*Chromium as a Corrosion Preventive	74
Chromium Chloride Solution	170
*Chromium Improves Design of Metal Products	256
Chromium, Influence of the Cathode on the Electrodeposition of	354
Chromium Plate, Nickel Under	482
Chromium Plated Automobile	385
Chromium Plating, Anodes for	435
Chromium Plating on Gold	521
Chromium Plating, Polishing and Buffing for	258
Chromium Plating Solution	353
Chromium Plating Solution	398
*Chromium Plating, Steel Anodes for	520
*Chromium Plating, The Bosse Process of	28
Chromium Plating, The Relation of Polishing to	77
Chromium Solution	438
Chromium Solution	477
*Chromium Tanks, New Hood for	383
Cleansing, The Growth of Industrial	79, 121
Cleansing and Coloring Bronze	435
Cleansing and Plating Solution, Copper	396
*Clock for University of Louvain, New Carillon	201
Cocoa, The Milk in the	440

Colonial Brass and Silver	167
Colored Aluminum	31
Coloring Bronze, Cleansing and	435
Company, A Message from the Chase Brass and	32
*Company 140 Years Old, A Plating Equipment	463
Compound, Bracing	208
Conference at Washington, Plating	125
*Construction, Giant Airships Use Aluminum Alloy	18
Construction, The Use of Metals in Dirigible	469
Convention, Impressions of the Annual	303
*Convention in Philadelphia, Foundrymen's	197
*Convention Will Be Held in Toronto, Electroplaters	243
Copper Cleansing and Plating Solution	396
Copper Company, A Message from the Chase	32
Copper, Defects in Fabricated	343
Copper, Defects in Fabricated	386
*Copper Fabricating Industry, The Brass and	32
*Copper Industry and Its Progress Since the War, The	522
*Copper, Mummy Preserved by	113
Copper Plate, Removing Nickel and	350
Copper Plate, Tarnish on	439
Copper Plating	78
Copper Plating	480
Copper Research, Arsenical	17
Copper, Tinning Strengthens Seams in	251
Copper, Welding	216
Copper Welding, A Note on	239
*Copper Wire, Drawing	1
Copper Wire, Drawing and Stripping Silver Plated	120
*Copper Work, Paul Reverse's	153
Cord, Protecting Rubber	353
Cores, Rubber Binders for Foundry	470, 511
Cores, To Study Proper Baking of	308
Correction	356
*Corrosion Preventive, Chromium as a	74
Corrosive Wire for Springs, Non-	428
Couplings, Fire Hose	70
Covers, Expanding Use of Tin in Cable	466
Cracking in Drawn Nickel Silver	428
*Crucible Furnaces, High Temperature	392
Crystal Spotting of Sulfide Finishes	211
Cuba, Nickel Plating Practice in	280
Cut Steel Buckle Finish	439

D

Data on Soft Metal Castings	310
Defective Brass Castings, The Reclamation of	10
Defects in Fabricated Copper	343
Defects in Fabricated Copper	356
Deposit on Steel, Black	400
Deposit, Soft Nickel	164
Depositing Beryllium	9
*Design of Metal Products, Chromium Improves	256
*Development of the Aluminum Industry, The	114, 157, 217
*Die-Casting	7
Die Casting Alloys	349
Die Casting Duralumin	474
Dirigible Construction, The Use of Metals in	469
*Discuss Research, Platers and Chemists	165
*Display of Brass Goods, Illuminated	391
*Division, Annual Meeting of the Institute of Metals	107
*Division of the Pyrene Manufacturing Company, The Metal Finishing	507
Door Knobs, Silver on Glass	168
Drawing and Stripping Silver Plated Copper Wire	120
*Drawing Copper Wire	1
Drawn Nickel Silver, Cracking in	428
*Dressing, Slab Mold	161
Dross, Reclaiming Cadmium from	310
Dross Spots in Brass Castings	163
Duralumin, Die Casting	474

E

Electric Furnace, Annealing of Metals in the	304
*Electric Smelting Advancement	11, 68, 116
Electrochemical Society Meeting	209
Electrochemical Society, Meeting of the	436
Electrodeposition of Aluminum Perfected	383
Electrodeposition of Chromium, Influence of the Cathode on the	354
Electrodeposition, Manufacturing Metal Parts by	474
*Electrodeposition of Aluminum	518
Electro-Galvanized Steel, Enameling	439
*Electrolytically, Gold Leaf Produced	308
Electro Pickling Steel	358
Electroplaters, Annual Meeting of Newark	216
*Electroplaters' Convention Will Be Held in Toronto	243
*Electroplaters' Society, Annual Meeting of the American	297
*Electroplating Industry, The Future of the	264
Electroplating on Aluminum and Its Alloys	261, 313
Electroplating Precious Stones	303
*Electro-Plating, Progress of	25
Electroplating Research	481
Enamel and Lacquer on Metal	482
Enameling Electro-Galvanized Steel	439
*Equipment Company 140 Years Old, A Plating	463
Error	167
Etching Process, The Stencil	352
Ethics from a Purchasing Agent's Viewpoint, Sales	169

Europe, Metal Manufacturing in	82
Evaluating Secondary Metals, Sampling and	200, 309, 345, 384
Excessive Chloride in Nickel Solution	353
Exhibits, Metal	3
Expanding Use of Tin in Cable Covers	406

F

Fabricated Copper, Defects in	343
Fabricated Copper, Defects in	386
*Fabricated Metals, Standards for	71
*Fabricating Industry, The Brass and Copper	32
*Factory, A Modern Silverplate Flatware	423
Faucets, Grinding in Brass Stops or	208
Finish, Cut Steel Buckle	439
Finish for Hardware, Black	396
Finish on Cast Aluminum, Satin	356
Finish on Steel, Blue	356
Finishes, Crystal Spotting of Sulfide	211
Finishing, Changes in Brass	13
*Finishing Division of the Pyrene Manufacturing Company, The Metal	507
Finishing Rooms, Fire Hazards in	29
*Finishing, The Walrus and Metal	124
Fire Hazards in Finishing Rooms	29
Fire Hose Couplings	70
*Firms Takes Up Chromium, An Old Plating	381
*Flatware Factory, A Modern Silverplate	423
*Foremen, Training	206
Foundry Cores, Rubber Binders for	470, 511
*Foundry Practice, The Fundamentals of	118, 203, 341, 390, 517
*Foundry Problems, Practical Solutions of	202
*Foundryman Thinks of Another, What One	339
*Foundrymen's Convention in Philadelphia	197
*Foundrymen's Headquarters, Move	201
*Foundrymen's Meeting in Philadelphia, American	265
*Fundamentals of Brass Foundry Practice, The	118, 203, 341, 390, 517
Furnace, Annealing of Metals in the Electric	304
*Furnaces, High-Temperature Crucible	392
Future of Aluminum in Transportation, The	218
*Future of the Electroplating Industry	264

G

*Gases Used to Operate Pipe Organs, Wind	263
Galvanized Steel, Enameling Electro-	439
Gas Valves, Zinc Alloy	466
German Aluminum Alloy, New	18
*Giant Airships Use Aluminum Alloy Construction	18
Gilding, Salt Water	164
Glass Door Knobs, Silver on	168
*Globe Brought Here, Ancient Silver	215
Gold and Silver, Separating	210
Gold, Chromium Plating on	521
*Gold Leaf Produced Electrolytically	308
Gold, Pickle for White	524
*Gold Plated Auto Chassis	78
Gold Plating, Tobacco Rose	440
*Goods, Illuminated Display of Brass	391
Green and Black, Smut	398
Green, Verde	27
Grinding, Belt	10
Grinding in Brass Stops or Faucets	208
Growth of Industrial Cleaning, The	79, 121

H

Hard Solder	474
Hardware, Black Finish for	396
Hazards in Finishing Rooms, Fire	29
Headquarters, Move Foundrymen's	201
*Here, Ancient Silver Globe Brought	215
*High Temperature Crucible Furnaces	392
*History of Nickel, The Recent	21
*Home, When Spoons Are Made At	357
*Hood for Chromium Tanks, New	383
Hose Couplings, Fire	70
Hot Nickel, Steel Tank for	435

I

*Illuminated Display of Brass Goods	391
Impressions of the Annual Convention	303
*Improves Design of Metal Products, Chromium	256
Impurities in Brass	349
*Inch, Measuring a Billionth of an	272
India, Brass Working in	251
Industrial Cleaning, The Growth of	79, 121
*Industries of the United States, Metal	17
*Industry and Its Progress Since the War, The	522
Copper	271
*Industry, Applied X-Rays in the Metal	271
*Industry, Development of the Alumi-	114, 157, 217
Industry, Plumbers' Brasswork a New	257
*Industry, The Brass and Copper Fabricating	32
*Industry, The Future of the Electroplating	264
Industry, The Metal Plating	30
Influence of the Cathode on the Electro-deposi-	554
tion of Chromium	510
Ingot Metal Purchases, Standardizing	159
Institute of Metals, British	107
*Institute of Metals Division, Annual Meeting	429
of the	255
Institute of Metals Meeting, British	255
Iron Castings, Tinning	255

J

Joining Aluminum and Its Alloys, Methods of	388
---	-----

K

Knobs, Silver on Glass Door	168
-----------------------------------	-----

L

Lacquer on Metal, Enamel and	482
Lead and Tin Progress	19
Lead From Babbitt, Removing	117
Lead Plating, Tin and	398
Lead Poisoning and Its Precautions	439
*Leaf Produced Electrolytically, Gold	308
*Light Brigade, The Charge of the	310
*Louvain, New Carillon Clock for University of	201
Lubricant for Valve Packing	474

M

*Made at Home, When Spoons are	357
Manganese Bronze	5
Manufacture of Steel Measuring Tape, The	390
*Manufacturing Company, The Metal Finishing	507
Division of the Pyrene	507
Manufacturing in Europe, Metal	474
Manufacturing Metal Parts by Electrodeposition	474
Market for 1927, Review of the Silver	311
Materials Meets, Society for Testing	142
Materials Testing Society Meeting	524
Meaning of "pi"	272
*Measuring a Billionth of an Inch	259
Measuring pH Values	399
Measuring Tape, The Manufacture of Steel	13
Mechanical Brass Solution	429
Meeting, British Institute of Metals	200
Meeting, Electrochemical Society	265
*Meeting in Philadelphia, American Foundry-	162
men's	162
Meeting, Materials Testing Society	297
*Meeting of the American Electroplaters' Society,	436
Meeting of the Electrochemical Society	107
*Meeting of the Institute of Metals Division,	216
Meeting of Newark Electroplaters, Annual	126
Meeting of the New York Platers	311
Meets, Society for Testing Materials	32
Message from the Chase Brass and Copper	310
Company	482
Metal Castings, Data on Soft	3
Metal, Enamel and Lacquer on	507
Metal Exhibits	124
*Metal Finishing Division of the Pyrene Manu-	17
facturing Company, The	271
*Metal Finishing, The Walrus and	82
*Metal Industries of the United States	204
*Metal Industry, Applied X-Rays in the	474
Metal Manufacturing in Europe	30
Metal, Monotype	256
Metal Parts by Electrodeposition, Manufacturing	510
Metal Plating Industry, The	208
*Metal Products, Chromium Improves Design of	467
Metal Purchases, Standardizing Ingot	63
Metal, Treating Old Babbitt	394, 472
Metal Week in Philadelphia, National	159
*Metallurgical Plant, A Pioneer	107
*Metals and Tin Solders from Scrap Metals,	469
The Production of White Bearing	19
Metals, British Institute of	469
*Metals Division, Annual Meeting of the Insti-	304
tute of	429
Metals Going to Antarctic	385
*Metals in 1927: Outlook for 1928, Progress of	14
Metals in Dirigible Construction, The Use of	269, 300, 345, 384
Metals in the Electric Furnace, Annealing of	349
Metals Meeting, British Institute of	71
Metals of Superstrength	23
*Metals Retrospect, A	513
Metals, Sampling and Evaluating Second-	397
ary	163
Metals, Sorting Scrap	388
*Metals, Standards for Fabricated	440
*Metals, The Precious	163
*Metals, The Production of White Bearing	440
Metals and Tin Solders from Scrap	163
Metals, The Stain Spotting of Cast	440
Metals, Twinning in	163
Methods of Joining Aluminum and Its Alloys	440
Milk in the Coconut, The	163
Mill Bearings, Alloy for	440
Mill Progress, Brass Rolling	440
Mills, Screen Plates for Paper	440
Mixing Arsenic with Tin	440
Mixture for Slush Castings	440
*Modern Silverplate Flatware Factory, A	440
Mold Dressing, Slab	440
Monotype Metal	440
Move Foundrymen's Headquarters	440
*Mummy Preserved by Copper	440

N

National Metal Week in Philadelphia	467
*New Carillon Clock for University of Louvain	201
Newark Electroplaters, Annual Meeting of	216
New German Aluminum Alloy	18
*New Hood for Chromium Tanks	383

New Industry, Plumbers' Brasswork a	257
New Specifications on Non-Ferrous Welding Rods	519
New York Platers, Meeting of the	126
Nichrome Plating	519
Nickel and Copper Plate, Removing	350
Nickel Anodes and the Acidity of the Solution	350
Nickel Deposit, Soft	164
Nickel on Zinc Alloys	9
Nickel on Zinc Alloys	65
Nickel on Zinc-Aluminum Castings	164
Nickel Plating Old Pewter	398
Nickel Plating Practice in Cuba	200
Nickel, Preventing Brittleness and Stains in	170
Nickel Silver, Cracking in Drawn	429
Nickel Silver Pouring Temperature	391
Nickel Solution Additions	13
Nickel Solution, Excessive Chloride in	353
Nickel, Steel Tank for Hot	435
*Nickel, The Recent History of	21
Nickel Under Chromium Plate	482
Nickel Week, Paris Observes	272
Non-Corrosive Wire for Springs	428
Non-Ferrous Welding Rods, New Specifications	519
on	259
Note on Copper Welding, A	259

O

Observes Nickel Week, Paris	272
Old Babbitt Metal, Treating	208
Old Pewter, Nickel Plating	398
*Old Plating Firm Takes Up Chromium, An	381
One Foundryman Thinks of Another, What	339
*Operate Pipe Organs, Wind Gales Used to	263
*Organs, Wind Gales Used to Operate Pipe	263
*Our Twenty-fifth Anniversary	37
Out on Brass Plate, Spotting	400
*Outlook for 1928—Progress of Metals in 1927	19
Oxidizing Brass and Aluminum	356
Oxidizing Solution for Brass Plate	435

P

Packing, Lubricant for Valve	474
Palladium and Cadmium Solutions	356
Paper Mills, Screen Plates for	342
Paris Observes Nickel Week	272
Parts by Electrodeposition, Manufacturing Metal	474
*Paul Revere's Copper Work	153
Perfecting, Electrodeposition of Aluminum	383
Pewter for Rolling and Spinning	112
Pewter, Nickel Plating Old	398
"pH," Meaning of	524
pH Values, Measuring	259
*Philadelphia, American Foundrymen's Meeting	265
in	197
*Philadelphia, Foundrymen's Convention in	467
Philadelphia, National Metal Week in	65
Pickle for Bronze Wire	524
Pickle for White Gold	358
Pickling Steel, Electro-	63
*Pioneer Metallurgical Plant, A	263
*Pipe Organs, Wind Gales Used to Operate	63
*Plant, A Pioneer Metallurgical	482
Plate, Nickel Under Chromium	435
Plate, Oxidizing Solution for Brass	350
Plate, Removing Nickel and Copper	65
Plate, Soldering on Cadmium	400
Plate, Spotting Out on Brass	439
Plate, Tarnish on Copper	78
*Plated Auto Chassis, Gold	385
Plated Automobile, Chromium	120
Plated Copper Wire, Drawing and Stripping	165
Silver	126
*Platers and Chemists Discuss Research	24
Platers, Meeting of the New York	67
Platers' Rash	307
Plates, Battery	342
Plates, Casting	435
Plates for Paper Mills, Screen	125
Plating, Anodes for Chromium	78
Plating Conference at Washington	480
Plating, Copper	463
Plating, Copper	30
*Plating Equipment Company, 140 Years Old, A	252
*Plating Firm Takes Up Chromium, An Old	475
Plating Industry, The Metal	398
*Plating in Quantity Production, Cadmium	521
Plating, Nichrome	356
Plating Old Pewter, Nickel	258
Plating on Gold, Chromium	260
Plating, Platinum and Rhodium	480
Plating, Polishing and Buffing for Chromium	25
Plating Practice in Cuba, Nickel	480
Plating Practice, Questions on	480
*Plating, Progress of Electro-	480
Plating Shop, A Railroad	353
Plating Solution, Chromium	398
Plating Solution, Chromium	396
Plating Solution, Copper Cleansing and	520
*Plating, Steel Anodes for Chromium	28
*Plating, The Boase Process of Chromium	77
Plating, The Relation of Polishing to Chromium	398
Plating, Tin and Lead	440
Plating, Tobacco Rose Gold	356
Platinum and Rhodium Plating	257
Plumbers' Brasswork a New Industry	430
Poisoning and Its Precautions, Lead	258
Polishing and Buffing for Chromium Plating	77
Polishing to Chromium Plating, The Relation of	391
Pouring Temperature, Nickel Silver	391

B

Baker, E. M., "Steel Anodes for Chromium Plating"	520
Barrows, W. P., Crystal Spotting of Sulfide Finishes	211
Barrows, W. P., Stain Spotting of Cast Metals	397
Barrows, Walter S., "Annual Meeting of the American Electroplaters' Society"	297
Barrows, Walter S., "Electroplaters' Convention Will Be Held in Toronto"	243
Baynes, John R., The Stencil Etching Process	352
Benoliel, D. J., The Growth of Industrial Cleaning	79, 121
Blackall, A. C., Arsenical Copper Research	17
Blackall, A. C., British to Award Prize	17
Blackall, A. C., Metal Exhibits	3
Blair, P. W., Brazing Compound	208
Blair, P. W., Grinding in Brass Stops or Faucets	208
Blair, P. W., Hard Solder	474
Blair, P. W., Lubricant for Valve Packing	474
Blair, P. W., Non-Corrosive Wire for Springs	428
Blair, P. W., Rapid Brazing	123
Blair, P. W., Reclaiming Brass Castings	213
Blair, Peter W., Reclamation of Defective Brass Castings, The	10
Blair, P. W., Soldering on Cadmium Plate	65
Blair, Peter W., Standard Threads	27
Blair, P. W., Tinning Iron Castings	235
Blair, P. W., Welding Copper	216
Blanchard, W. L., Treating Old Rabbitt Metal	208
Blum, Dr. William, Electroplating Research	481
Blum, Dr. Wm., "Progress of Electro-Plating"	25
Buchanan, C. G., Fighting Demon Rust	410

C

Chase, Rodney, A Message from the Chase Brass and Copper Company	32
Clamer, G. H., "Electric Smelting Advancement"	11, 68, 110
Clarke, R. R., "Fundamentals of Brass Foundry Practice"	118, 203, 341, 390, 517
Coe, John A., "Brass and Copper Fabricating Industry"	32
Corse, W. M., "A Metals Retrospect"	14
Cowan, W. A., Mixing Arsenic with Tin	466

D

Davis, E. K., The Future of Aluminum in Transportation	215
Davis, F. J., "A Pioneer Metallurgical Plant"	63
Dickie, Francis, "Gold Plated Auto Chassis"	78

E

Eckelmann, L. E., "Metal Finishing Division of the Pyrene Manufacturing Company"	507
Edelman, P. E., Chromium Plated Automobile	385
Eldridge, Charles H., Polishing and Buffing for Chromium Plating	258
Electrochemist "Platers and Chemists Discuss Research"	165
Ellwanger, P. W., Relation of Polishing to Chromium Plating, The	77
Eyles, A., Methods of Joining Aluminum and Its Alloys	388

G

Geerlings, Gerald K., "The Architect, the Artisan and Bronze"	96
Geiger, C. W., A Railroad Plating Shop	480
Geiger, C. W., "Illuminated Display of Brass Goods"	391
Gerline, Otto, What One Foundryman Thinks of Another	339

H

Haas, Joseph, Copper Plating	78
Haas, Joseph, Mechanical Brass Solution	13
Haas, Joseph, Nickel on Zinc Alloys	9
Haas, Joseph, Nickel Solution Additions	13
Haas, Joseph, Stripping Silver	78
Haas, Joseph, Tin Solution	13
Haas, Joseph, Verde Green	27
Handy and Harman, Review of the Silver Market for 1927	81
Harman, Handy and Review of the Silver Market for 1927	81
Hetherington, R. K., "Chromium Improves Design of Metal Products"	256
Hiers, George O., Lead and Tin Progress	19
Hobbs, Franklin W., Manufacture of Steel Measuring Tape	399
Hoff, Clayton M., "Cadmium Plating in Quantity Production"	475
Hoke, C. M. (Jewelry Metallurgist), Separating Gold and Silver	210
Hoke, C. M., Silver Refining	70
Hoke, Calm M., "The Precious Metals"	23
Horton, J., "A Plating Equipment Company, 140 Years Old"	463
Hutton, J. M., Aluminum to Resist Soap Solution	474

I

Isenburger, Herbert R., "Applied X-Rays in the Metal Industry"	271
--	-----

J

Jeffries, Zay, "Aluminum Alloys"	432
Jewelry Metallurgist (C. M. Hoke), Separating Gold and Silver	210

K

Keeney, Robert M., Annealing of Metals in the Electric Furnace	304
Keyes, D. B., "Electrodeposition of Aluminum"	518
Klabunde, W., "Electrodeposition of Aluminum"	518

L

Lawson, William B., "The Recent History of Nickel"	21
Leighton, R. T., "Gold Leaf Produced Electrolytically"	308
Loven, O. H., "Cadmium Plating in Quantity Production"	252
Loven, Otto H., "Cadmium Plating in Quantity Production"	475
Lovering, E. G., Nickel Plating Practice in Cuba	260
Lukens, Dr. Hiram S., Influence of the Cathode on the Electrodeposition of Chromium	354

M

Manderscheid, James J., "The Walrus and Metal Finishing"	124
Mason, William, "High-Temperature Crucible Furnaces"	392
Mason, William, Welding Aluminum Castings	205
Munning, A. P., "The Future of the Electroplating Industry"	264

P

Pack, Charles, "Die Casting"	7
Pettibone, E. E., "Steel Anodes for Chromium Plating"	520
Pettis, William J., Brass Rolling Mill Progress	4
Pettis, W. J., Cracking in Drawn Nickel Silver	428
Pettis, Wm. J., Drawing and Stripping Silver Plated Copper Wire	120
Pettis, W. J., Pickle for Bronze Wire	65
Pettis, William J., "Slab Mold Dressing"	161
Pfannhauser, Dr. W., "Bosse Process of Chromium Plating, The"	28
Price, William B., "Physical Properties of Admic"	43
Proctor, Charles H., Calcined Soot	510
Proctor, Charles H., Chromium Chloride Solution	170
Proctor, Charles H., Cleansing and Coloring Bronze	435
Proctor, Charles H., Colonial Brass and Silver	167
Proctor, Charles H., Drawing and Stripping Silver Plated Copper Wire	120
Proctor, Charles H., Electro Pickling Steel	358
Proctor, Charles H., Electroplating Precious Stones	303
Proctor, Charles H., Impressions of the Annual Convention	303
Proctor, Charles H., Metal Plating Industry	30
Proctor, Charles H., Nichrome Plating	519
Proctor, Charles H., Nickel on Zinc-Aluminum Castings	164
Proctor, Charles H., Oxidizing Solution for Brass Plate	435
Proctor, Charles H., Preventing Brittleness and Stains in Nickel	170
Proctor, Charles H., Salt Water Gilding	164
Proctor, Charles H., Silver on Glass Door Knobs	168
Proctor, Charles H., Soft Nickel Deposit	164
Proctor, Charles H., Steel Bus Bars	521
Proctor, Charles H., Use of Cadmium in Acid	168
Proctor, Charles H., White Silver Strike on Steel	125

R

Re, A. V., Black Deposit on Steel	400
Re, A. V., Copper Cleansing and Plating Solution	396
Reardon, W. J., Alloy for Mill Bearings	163
Reardon, William J., Aluminum Bronze	6
Reardon, W. J., Analysis of Zinc Alloys	340
Reardon, W. J., Battery Plates	67
Reardon, W. J., Casting Plates	307
Reardon, W. J., Colored Aluminum	31
Reardon, W. J., Data on Soft Metal Castings	310
Reardon, W. J., Dross Spots in Brass Castings	163
Reardon, W. J., Impurities in Brass	349
Reardon, William J., Manganese Bronze	5
Reardon, W. J., Monotype Metal	204
Reardon, W. J., Nickel Silver Pouring Temperature	391
Reardon, W. J., Pewter for Rolling and Spinning	112

Reardon, William J., "Practical Solutions of Foundry Problems"	202
Reardon, W. J., Reclaiming Cadmium from Dross	310
Reardon, W. J., Reclaiming Zinc	312
Reardon, W. J., Refining Scrap Aluminum	344
Reardon, W. J., Removing Lead from Rabbitt	117
Reardon, W. J., Sandy Castings	255
Reardon, W. J., Screen Plates for Paper Mills	342
Reardon, W. J., Smooth Brass Castings	304
Reardon, W. J., Sorting Scrap Metals	349
Reardon, W. J., Spots in Brass Castings	156

S

Saunders, A. F., "When Spasms are Made at Home"	357
Schickstanz, S. T., "Electrodeposition of Aluminum"	518
Schneider, William G., "Copper Industry and Its Progress Since the War, The"	522
Silberstein, James, A Note on Copper Welding	259
Silberstein, James, Lead Poisoning and Its Precautions	439
Silberstein, James, Manufacturing Metal Parts by Electrodeposition	474
Silberstein, James, Metals of Superstrength	385
Sizelove, O. J., Anodes for Chromium Plating	435
Sizelove, Oliver J., Baume Chart	482
Sizelove, O. J., Black Finish for Hardware	396
Sizelove, Oliver J., Blue Finish on Steel	356
Sizelove, Oliver J., Chromium Plating on Gold	521
Sizelove, Oliver J., Chromium Plating Solution	353
Sizelove, O. J., Chromium Solution	438
Sizelove, Oliver J., Chromium Solution	477
Sizelove, Oliver J., Copper Plating	480
Sizelove, O. J., Cut Steel Buckle Finish	439
Sizelove, Oliver J., Enamel and Lacquer on Metal	482
Sizelove, O. J., Enameling Electro-Galvanized Steel	439
Sizelove, Oliver J., Excessive Chloride in Nickel Solution	353
Sizelove, Oliver J., Meaning of "pH"	524
Sizelove, O. J., Nickel Plating Old Pewter	398
Sizelove, Oliver J., Nickel Under Chromium Plate	482
Sizelove, Oliver J., Oxidizing Brass and Aluminum	356
Sizelove, Oliver J., Palladium and Cadmium Solutions	356
Sizelove, Oliver J., Pickle for White Gold	524
Sizelove, Oliver J., Platinum and Rhodium Plating	356
Sizelove, Oliver J., Protecting Rubber Cord	353
Sizelove, Oliver J., Questions on Plating Practice	480
Sizelove, Oliver J., Removing Nickel and Copper Plate	350
Sizelove, O. J., Removing Rust from Steel	435
Sizelove, Oliver J., Satin Finish on Cast Aluminum	356
Sizelove, O. J., Smut Green and Black	398
Sizelove, O. J., Spotting Out on Brass Plate	400
Sizelove, O. J., Steel Tank for Hot Nickel	435
Sizelove, O. J., Tarnish on Copper Plate	439
Sizelove, O. J., Tin and Lead Plating	398
Sizelove, O. J., Tobacco Rose Gold Plating	440
Smart, W. J., Fire Hazards in Finishing Rooms	29
Space, F. G., Sales Ethics From a Purchasing Agent's Viewpoint	169
Stevens, Frederic B., "The Charge of the Light Brigade"	316
Stevens, Frederic B., The Milk in the Coconut	440
Suman, R. G., "Nickel Anodes and the Acidity of the Solution"	350
Swann, Jr., Sherlock, "Electrodeposition of Aluminum"	518

T

Taylor, F. T., Voltmeter, Ammeter, Rheostat	437, 478
Thews, Edmund R., "Production of White Bearing Metals and Tin Solders from Scrap Metals"	394, 472, 513
Tillmann, Melville, "An Old Plating Firm Takes Up Chromium"	381
Tour, Sam, Die Casting Duralumin	474
Tour, Sam, Zinc Alloy Gas Valves	466
Tuthill, Stephen S., "Zinc"	20

W

Ward, William, "Foundrymen's Convention in Philadelphia"	197
Westbrook, F. A., "A Modern Silverplate Plating Factory"	423
Westbrook, F. A., "Drawing Copper Wire"	1
Westbrook, F. A., "Training Foremen"	206
Willis, Wm. A., "The Copper Industry"	19
Work, Harold K., Electroplating on Aluminum and Its Alloys	261, 313
Wright, Leslie, "Chromium as a Corrosion Preventive"	74
Wright, T. A., Sampling and Evaluating Secondary Metals	269, 309, 345, 384

CORRESPONDENCE AND
DISCUSSION

Acid Brass and Bronze	130
Antique Bronze on Steel	130
Beryllium Deposition	174
Charter Member, A.	444
Enamel for Conduit Coating	320
French Gray Finish	320
Inquiry Brings Results	130
Is the Bureau of Standards Seeking Control of All Gages and Micrometers?	174
Platers' Wrinkles Indispensable	320
Pouring 60-40 Alloy	174
Purity of Nickel Chloride	444
Silica and Magnesite Bricks	405

EDITORIALS

Abate, Walter L.	129
Ag'in' the Gov'ment	172
Airplane Expansion	221
Aluminum in Automobiles	402
Aluminum Industry	526
American and Foreign Plating Methods	360
American Metal Resources	275
At the Foundry Convention	221
Building Industry, The	128
Candidate of Industry, A	319
Chase Builds in the West	526
Chromium Plating and the Public	84
Chromium Plating Hazards	485
Copper Alloys	220
Copper in 1927	85
Copper Is Up	442
Copper Progress	527
Copper Still Rising	485
Cutting Circular Letter Costs	442
Evaluating Secondary Metal	173
Forepart and Business Part of Herbert Hoover's Address of Acceptance	403
Foundry Industry, The	494
Foundrymen's Convention, The	274
Foundrymen's Function, The	220
Good Management	361
Go To The Plater's Convention	274
Handling Lacquer	253
Institute of Metals Division Meeting	128
January Issue Delayed	527
Marine Disaster	526
Metals Versus Metals	402
Moving Pictures by Radio	85
Names for Alloys	274
National Metal Week	443
New Field for Metals, A	318
New Metal Institute, A	360
Outstanding Platers' Convention, An	318
Platers Confer with Chemists	172
Platers' Meetings	128
Platers' Research Fund	85
Platers Should Study Metals	221
Price Cutting	129
Prince Takes Up Jewelry, The	129
Progress of the British Institute	172
Prosperity and Progress	443
Review of the Metal Industries for 1927—Out- look for 1928	34
Safety in the Metal Plants	442
Salvaging Waste Metals	318
Sampling Solutions	443
Send the Plater to the Convention	173
Simplified Practice Is Growing	402
Solutions Analyzed for Shop Problems	361
Standard Descriptions for Gold	220
Strayed Mail	485
Tin Consumption	484
Why Foundries Lose Money	84
Will Welding Replace Riveting?	221
Work of the Bureau of Standards	527

NEW BOOKS

Abrasive Handbook, The	320
Atlas Metallurgicus	222
Behavior of Prices, The	444
Commerce Year Book, 1926, Vol. 11—Foreign Countries	130
Handbook of Chemistry and Physics	223
Iron and Steel	222
Journal of the Institute of Metals, Volume 38	222
Light Metals and Alloys, Aluminum and Mag- nesium	320
"Mechanical World" Electrical Pocket Book, 1928	223
Metal Statistics—1928	444
Mineral Resources of the United States, 1924	223
National Electrical Safety Code	222
Nema Handbook of Apparatus Standards	405
Postponing Strikes	130
Proceedings of the American Society for Test- ing Materials, Volume 27	223
Protective Metallic Coatings	222
Representative Industries in the United States Standards of the American Society for Test- ing Materials for 1927	444
Standards Yearbook, 1928	222
Storage Batteries	405
Technique of Vitreous Enameling	223
Transactions of the American Foundrymen's As- sociation, Vol. XXXV	130
Transactions of the American Foundrymen's Association, 1927	222
Yearbook of the American Bureau of Metal Statistics, 1927	320
Yellow Gold of Cripple Creek	444

TECHNICAL PAPERS

Characteristics of Very Pure and Commercial Lead	130
Commercial Testing and College Research Lab- oratories	224
Constitution of Lead-Antimony Alloys	224
Constitution of the Copper-Aluminum System	224
Effect of Temperature on the Properties of Metals	130
Effect of the Testing Method on the Determina- tion of Corrosion Resistance	223
Electric Heating and Electric Welding	223
Electroreduction of Uranyl Salts by Means of the Mercury Dropping Cathode	224
Forging Machine Die Design for Deep Piercing Lead-Tin System of Alloys Re-Examined by an Electrical Resistance Method	224
Maxima on Current-Voltage Curves, Electroly- sis of Nickel Salt Solutions with the Mer- cury Dropping Cathode	224
Maxima on the Current Voltage Curves, Part 2. The Maxima on the Polarization Curves of Uranyl Salt Solutions	224
Metal Recovery from Bronze Foundry Slags	224
Metallographic Study of the Path of Fatigue Failure in Copper	224
Overpotential at Metallic Cathodes, Silver in Neutral and Alkaline Solutions	224
Quantitative Spectrum Analysis	224
Some Physico-Chemical Properties of Stannous Oxide	224
Surface Tension of Molten Metals	224
Technical Information on Aluminum Bronze	224
Use of Inhibitors in Pickling	275
Use of Lead in Engineering Practice	130
Use of Lead in Sulphuric Acid Manufacture	130
Zinc and Its Corrosion Resistance	224

SHOP PROBLEMS

A

18-Karat White Gold, Plating	277
Acid Brass and Bronze	40
Acid Dip, Red Brass	87
Additions, Copper Solution	321
Alloy, Flux for Copper-Lead	528
Aluminum, Cleaning	225
Aluminum, Polishing	87
Aluminum, Polishing Die Cast	176
Aluminum Platers' "Furniture"	445
Antique Bronze Finish	486
Auto Radiators, Chromium on	131

B

Baby Shoes, Plating	322
Baskets, Stripping Plating	363
Battery Connections, Lead on	322
Battery Plates, Smelting	529
Bicycle Parts, Polish for	226
Bicycle Spokes, Plating	362
Black Finish for Iron, Rust-Proof	226
Black Finish on Steel	131
Black Finish on Steel	321
Black Finish, Rustproof	132
Black Nickel	40
Black on Brass	40
Black on Brass or Steel	406
Blue on Steel, Mottled	86
Borax, Removing Fused	446
Brass Acid Dip, Red	87
Brass and Bronze, Acid	40
Brass, Black on	40
Brass Castings, Bright Dip for	276
Brass Castings, Dross in	276
Brass Finish, Brush	175
Brass Finish, Old Spanish	176
Brass Finish, Stained	407
Brass, Hard Spots in Cast	132
Brass, Hot Lead Dip for	86
Brass Immersion Dip, Copper or	445
Brass, Lead Plate on	86
Brass, Matte Dip for	86
Brass, Old English Burnt	446
Brass, Old English Finish on	175
Brass or Steel, Black on	406
Brass, Pores in Red	446
Brass Radio Parts, Cleaning	276
Brass, Scrap Loss in Casting	529
Brass, Snow Flake Finish on	487
Brass, Stripping Silver from	322
Bright Dip for Brass Castings	276
Bright Nickel Solution	321
Bright Silver on Soft Metal	445
Brightening Pennies	486
Brighter Dip for Copper	40
Britannia Metal, Resilvering	226
Bronze, Acid Brass and	40
Bronze Castings, Porous	528
Bronze Coating on Glass	486
Bronze Finish, Antique	486
Bronze and Gun Metal Dips, Statuary	529
Bronze Plate, Uneven	87
Brown or Green on Cast Iron	175
Brush Brass Finish	175
Burnishing, Tumbling and	487
Burnt Brass, Old English	446

C

Cadmium and Tin Solutions	445
Cadmium on Nickel	406
Cadmium on Wrenches	131
Cadmium Solution	131
Carborundum Powder on Metals	528
Cast Aluminum, Polishing Die	176
Cast Brass, Hard Spots in	132
Cast Copper, High Conductivity	132
Cast Iron, Brown or Green on	175
Casting Brass, Scrap Loss in	529
Castings, Bright Dip for Brass	276
*Castings, Dross in Brass	276
Castings, Porous Bronze	528
Chromium, Improving Throwing Power of	446
Chromium on Auto Radiators	131
Chromium Plating	86
Chromium Plating Practical? Is	175
Chromium Solution	40
Chromium Solution	132
Cleaning Aluminum	225
Cleaning Brass Radio Parts	276
Coating Copper with Lead	276
Coating, Heavy Nickel on Tin	486
Coating on Glass, Bronze	486
Conductivity Cast Copper, High	132
Connections, Lead on Battery	322
Copper, Brighter Dip for	40
Copper Deposits, Thicknesses of	87
Copper, High Conductivity Cast	132
Copper-Lead Alloy, Flux for	528
Copper, Mercury Dip for	487
Copper or Brass Immersion Dip	445
Copper Plating Steel	321
Copper, Producing Wood Grain on	407
Copper Solution Additions	321
Copper, Spotting on	363
Copper with Lead, Coating	276
Cyanide Solution, Zinc	363

D

Depositing Silver on Glass	362
Deposits, Thicknesses of Copper	87
Die Cast Aluminum, Polishing	176
Dip, Copper or Brass Immersion	445
Dip for Brass Castings, Bright	276
Dip for Brass, Hot Lead	86
Dip for Brass, Matte	86
Dip for Copper, Brighter	40
Dip for Copper, Mercury	487
Dip, Red Brass Acid	87
Dips, Statuary Bronze and Gun Metal	529
*Dross in Brass Castings	276

E

Enamel from Steel, Removing	487
English Burnt Brass, Old	446
English Finish on Brass, Old	175
English Hope Finish	406
Equipment, Questions on	446

F

Finish, Antique Bronze	486
Finish, Brush Brass	175
Finish, English Hope	406
Finish for Iron, Rustproof Black	226
Finish, French Gray	225
Finish, Old Spanish Brass	176
Finish on Brass, Old English	175
Finish on Brass, Snow Flake	487
Finish on Steel, Black	131
Finish on Steel, Black	321
Finish, Rustproof Black	132
Finish, Satin	41
Finish, Stained Brass	407
Flake Finish on Brass, Snow	487
Flux for Copper-Lead Alloy	528
Food Products, Protecting	529
French Gray Finish	225
"Furniture," Aluminum Printers'	445
Fused Borax, Removing	446

G

Gilding, Silvering and	407
Gilding Table Ware	362
Glass, Bronze Coating on	486
Glass, Depositing Silver on	362
Gold on Rubber	41
Gold Plate, Solution for Heavy	407
Gold, Plating and Stripping	41
Gold Plating by Immersion	277
Gold, Plating 18-Karat White	277
Gold Strip, White	41
Gold, Tobacco Rose	529
Grain on Copper, Producing Wood	407
Gray Finish, French	225
Green on Cast Iron, Brown or	175
Gun Metal Dips, Statuary Bronze and	529

H

Hard Spots in Cast Brass	132
Heavy Gold Plate, Solution for	407
Heavy Nickel on Tin Coating	486
High Conductivity Cast Copper	132
Hope Finish, English	406
Hot Lead Dip for Brass	86
Hot Nickel Solution	225

I

Immersion Dip, Copper or Brass	445
Immersion, Gold Plating by	277
Improving Throwing Power of Chromium	446
Impurities from Lead, Removing	528
Iron, Brown or Green on Cast	175
Iron, Rustproof Black Finish for	226
Is Chromium Plating Practical?	175

K

Karat White Gold, Plating 18-	277
Knives, Polishing	41

L

Lead Alloy, Flux for Copper	528
Lead, Coating Copper with	276
Lead Dip for Brass, Hot	86
Lead on Battery Connections	322
Lead Plate on Brass	86
Lead, Removing Impurities from	528
Linseed Oil Soft Soap	529
Loss in Casting Brass, Scrap	529

M

Maintaining Silver Solutions	225
Melting Zinc, Pots for	528
Matte Dip for Brass	86
Mercury Dip for Copper	487
Metal, Bright Silver on Soft	445
Metal Dips, Statuary Bronze and Gun	529
Metal, Resilvering Britannia	226
Metals, Carborundum Powder on	528
Mottled Blue on Steel	86

N

Nickel and Paint, Removing	407
Nickel, Black	40
Nickel, Cadmium on	406
Nickel on Tin Coating, Heavy	486
Nickel Plate, Peeling	322
Nickel Solution, Bright	321
Nickel Solution, Hot	225

O

Oil from Plated Surface, Removing	226
Oil Soft Soap, Linseed	529
Old English Burnt Brass	446
Old English Finish on Brass	175
Old Spanish Brass Finish	176

P

Paint, Removing Nickel and	407
Parts, Cleaning Brass Radio	276
Parts, Polish for Bicycle	226
Peeling Nickel Plate	322
Pennies, Brightening	486
Pins, Tinning Steel	529
Plate on Brass, Lead	86
Plate, Peeling Nickel	322
Plate, Solution for Heavy Gold	407
Plate, Uneven Bronze	87
Plated Surface, Removing Oil from	226
Plates, Smelting Battery	529
Plating and Stripping Gold	41
Plating Baby Shoes	322
Plating Baskets, Stripping	363
Plating Bicycle Spokes	362
Plating by Immersion, Gold	277
Plating, Chromium	86
Plating 18-Karat White Gold	277
Plating Practical? Is Chromium	175
Plating Practice, Questions on	277
Plating Reflectors	406
Plating Steel, Copper	321
Plating, Time Required for	132
Plating, Tin	87
Polish for Bicycle Parts	226
Polishing Aluminum	87
Polishing Die Cast Aluminum	176
Polishing Knives	41
Pores in Red Brass	446
Porous Bronze Castings	528
Pots for Melting Zinc	528
Power of Chromium, Improving Throwing	446
Powder on Metals, Carborundum	528
Practical? Is Chromium Plating	175
Practice, Questions on Plating	277
Printers' "Furniture," Aluminum	445
Producing Wood Grain on Copper	407
Products, Protecting Food	529
Proof Black Finish for Iron, Rust	226
Proofing Steel Reeds, Rust-	176
Protecting Food Products	529

Q

Questions on Equipment	446
Questions on Plating Practice	277

R

Radiators, Chromium on Auto	131
Radio Parts, Cleaning Brass	276

Red Brass Acid Dip	87
Red Brass, Pores in	446
Reeds, Rust-Proofing Steel	176
Reflectors, Plating	406
Removing Enamel from Steel	487
Removing Fused Borax	446
Removing Impurities from Lead	528
Removing Nickel and Paint	407
Removing Oil from Plated Surface	226
Replenishing Solutions	322
Required for Plating, Time	132
Resilvering Britannia Metal	226
Rose Gold, Tobacco	529
Rubber, Gold on	41
Rustproof Black Finish	132
Rust-Proof Black Finish for Iron	226
Rust-Proofing Steel Reeds	176

S

Satin Finish	41
Scrap Loss in Casting Brass	528
Shoes, Plating Baby	322
Silver from Brass, Stripping	322
Silver on Glass, Depositing	362
Silver on Soft Metal, Bright	445
Silver Solutions, Maintaining	225
Silvering and Gilding	407
Smelting Battery Plates	528
Snow Flake Finish on Brass	487
Soft Soap, Linseed Oil	529
Soft Metal, Bright Silver on	445
Soft, Linseed Oil Soft	529
Solution Additions, Copper	321
Solution, Bright Nickel	321
Solution, Cadmium	131
Solution, Chromium	40
Solution, Chromium	132
Solution for Heavy Gold Plate	407
Solution, Hot Nickel	225
Solution, Zinc Cyanide	363
Solutions, Cadmium and Tin	445
Solutions, Maintaining Silver	225
Solutions, Replenishing	322
Spanish Brass Finish, Old	176
Spokes, Plating Bicycle	362
Spots in Cast Brass, Hard	132
Spotting on Copper	363
Stained Brass Finish	407
Statuary Bronze and Gun Metal Dips	528
Steel, Black Finish on	131
Steel, Black Finish on	321
Steel, Black on Brass or	406
Steel, Copper Plating	321
Steel, Mottled Blue on	86
Steel Pins, Tinning	529
Steel Reeds, Rust-Proofing	176
Steel, Removing Enamel from	487
Strip, White Gold	41
Stripping Gold, Plating and	41
Stripping Plating Baskets	363
Stripping Silver from Brass	322
Surface, Removing Oil from Plated	226

T

Table Ware, Gilding	362
Thicknesses of Copper Deposits	87
Throwing Power of Chromium, Improving	446
Time Required for Plating	132
Tin Coating, Heavy Nickel on	486
Tin Plating	87
Tin Solutions, Cadmium and	445
Tinning Steel Pins	529
Tobacco Rose Gold	529
Tumbling and Burnishing	487

U

Uneven Bronze Plate	87
---------------------	----

W

Ware, Gilding Table	362
White Gold, Plating 18-Karat	277
White Gold Strip	41
Wood Grain on Copper, Producing	407
Wrenches, Cadmium on	131

Z

Zinc Cyanide Solution	363
Zinc, Pots for Melting	528

PATENTS

A

Alloy, 1,653,630	177
Alloy, 1,657,389	227
Alloy, 1,667,966	323
Alloy, 1,671,408	364
Alloy, 1,675,708	408
Alloy, 1,676,856	447
Alloy, 1,680,577	488
Alloy, 1,683,749	530
Alloy, 1,684,131	530
Alloy, 1,685,975	530

87	Alloy, Acid or Sea-Water Resisting, 1,652,301.....	133
446	Alloy and Its Uses, 1,680,598	488
176	Alloy and Material Employing the Same,	
406	1,668,307	364
487	Alloy and Process for Making Same, 1,675,798.....	447
446	Alloy and Process of Making the Same, 1,684,696	530
528	Alloy of Copper, Tin and Nickel, 1,661,083.....	278
407	Alloys, Lead-Alkali Metal Containing Bearing-	
226	Metal, 1,652,078	133
322	Alloys of the Platinum Group, Production of	
132	1,660,159	278
226	Alloys, Manufacture of, 1,668,642	364
529	Aluminum Alloy of High Resistance, 1,680,004	488
41	Aluminum Alloy Piston, 1,670,956	364
132	Aluminum Alloys, Process of Improving,	
226	1,656,502	227
176	Aluminum-Base Alloy, 1,663,150	323
	Aluminum Bodies and Process of Making Same,	
	Protective Covering for, 1,672,280.....	364
	Aluminum from Aluminum Screenings and the	
	Like, Process of Recovering, 1,648,263.....	42
41	*Aluminum Melting Furnace, 1,671,546	364
528	Aluminum Screenings etc., Process of Treat-	
322	ing, 1,648,262	42
322	*Aluminum to Iron and Steel Sheets and	
362	Bands, Method of Applying a Plating of,	
445	1,667,787	323
225	*Articles Electrolytically, Apparatus for Produc-	
407	ing Sheets and Similar, 1,682,426	530

B

*Baking the Linings of Crucibles, Method of,	408
1,675,735	323
Bearing Alloy, 1,667,641	42
Bearing Material and Method of Making Same,	364
1,648,722	
Bias Buffer, 1,669,224	

C

Cadmium Plating, 1,681,509	488
*Casting Under Pressure in Dentistry, Appara-	227
tus for, 1,657,475	488
Cleaning and Burnishing Metallic Powders, Pro-	133
cess of, 1,681,521	133
Cleaning and Polishing Compound, 1,652,931	530
Coated Metallic Articles, Such As Stereotypic	447
Plates and Method of Producing Same, 1,	323
684,565	278
Coating for Metal and the Like, Protective,	278
1,678,980	278
Coating Metal Articles, Method of, 1,662,845	278
Coating Metal Articles with Metal, Method and	278
Apparatus for, 1,660,558	278
Coating Metal, Method of, 1,660,847	278
Coating Metals, Process of, 1,662,008	278
Colloidal Copper Sulphide and Process of Pre-	278
paring the Same, 1,657,430	278
Composition for Use in the Manufacture of or	88
for Use as Varnishes and the Like and Meth-	133
od of Making the Same, 1,650,899	227
Composition of Matter, 1,653,088	488
Copper Alloy and Process of Producing and	408
Treating the Same, 1,658,186	447
Copper Alloys and Improved Product, Method of	278
Treating, 1,680,045-1,680,046	227
Copper Alloys, Process for the Manufacture of,	408
1,675,008	447
Copper and Zinc Alloys, Process for Determin-	278
ing the Composition of, 1,676,709	227
Copper Refining, 1,660,220	364
Corrosion-Resistant Alloys, 1,657,957	133
Corrosion-Resistant Surfaces on Metals, Produc-	133
ing, 1,672,444	133
Corrosion-Resisting Alloy, 1,651,970	133
*Corrosion-Resisting Coating on Iron and Steel	133
and Products, Process of Producing, 1,651,278	278
Cyanides from Mixtures, Method of Separating,	278
1,660,667	278

D

Die-Casting Machine, 1,654,157	177
*Disintegrating Bulky Scrap Metal, Method of	278
and Apparatus for, 1,665,806	227
*Disintegrating Metal, Process for, 1,659,291	227

E

*Electric Bright-Annealing Furnace, 1,678,875	447
*Electric Bright-Annealing Furnace for Continu-	447
ously Bright Annealing, 1,678,876	88
*Electric Furnace, 1,650,675	42
*Electric Induction Furnace, 1,647,787	88
*Electric Torch for Welding, Brazing and Cut-	278
ting, 1,650,431	177
Electrobracing, Method of and Apparatus for,	88
1,660,805	278
Electrocleaning, 1,658,222	177
*Electrolytic Core Box, 1,649,312	88
*Electrolytically Separating the Alloys of Silver	530
With Other Precious or Base Metals, Process	488
of, 1,687,056	177
*Electroplating and the Like, Apparatus for,	323
1,677,817	177
Electroplating, Apparatus for, 1,655,781	323
Enamel for Coating Cans, 1,667,212	177
Enamel from Electrical Conductors, Method of	177
Removing, 1,653,805	177

F

Flux Applied in Soldering Aluminum and Its Alloys, 1,653,482	177
Fluxed Solder in Wire Form, Method of Manufacturing, 1,649,628	88
Fluxing Compound, 1,670,450	364

G

Galvanic Metal Coatings, Process for the Production of, 1,664,750	323
*Galvanized, Method of Treating Articles Being, 1,675,929	408
*Galvanizing Furnace, 1,649,824	88
Galvanizing, Method of, 1,663,037	323
Galvanoplasty and the Object Produced Thereby, Art of Incrusting, 1,662,430	278

H

Hardening and Working of Lead Alloys, Methods and Processes Relating to the 1,674,954-1,674,959 Inclusive	447
Heat-Resisting Alloy and Structure, 1,675,709	408
Heat-Treating Metals, Apparatus for, 1,653,215	133

I

*Induction Furnace, 1,648,797	42
*Induction Furnace, 1,655,983	177
*Induction Furnace, 1,676,545	447
*Induction Furnace, 1,682,388	530

L

Lacquer and Film Produced Therefrom, Low-Viscosity, 1,649,803	88
Lacquer and Process of Making Same, Nitrocellulose, 1,653,008	133
Lacquer, Nitrocellulose, 1,653,010	133
Lead Alloy, 1,681,272	488
*Lead-Pot Support, 1,657,508	227
Lead Products and Process of Producing Same, 1,651,886	133
Light Metal Alloy, 1,680,262	488
*Liquid Zinc from Blue Powder, Process for Making, 1,647,381	42

M

Magnesium Alloy, 1,649,521	42
Magnesium Alloy and Method of Making Same, 1,685,653	530
Magnesium and Magnesium Alloys to Inhibit Corrosion, Treatment of, 1,677,667	447
Metal Alloy, 1,656,695	227
Metal Alloy, 1,656,696	227
Metal Alloy, 1,671,952	364
*Metal Article, Composite, 1,648,678	42
Metal Cleaning Solution, 1,663,446	323
Metal Coated Sheet and Method of Making the Same, 1,675,134	408
Metal Coating Baths, Protective Composition for, 1,674,694	408
Metal-Coating Machine, 1,669,975	364
*Metal Coating Machine, 1,672,526	408
*Metal Coating Wire and the Like, Method for, 1,650,730	88
Metal Composition, 1,658,792	177
Metal Composition, 1,658,757	278
Metal-Drawing Apparatus, 1,667,387	323
*Metal-Drawing Apparatus, 1,679,906	488
Metal Pickling, 1,678,776	447
Metal Pickling, 1,678,776	447
Metal Reclaiming Process, 1,669,485	364
Metal Surfaces, Treatment of, 1,672,180	364
Metal-Treating Compound, and Method of Making Same, 1,659,214	227
*Metal Ware, Apparatus for Finishing, 1,651,197	88
Metallic Antimony and Alloys of Antimony and Alkali Metal Arsenates, Process of Producing, 1,654,527-1,654,528	177
*Metallic Baths, Process for Treating Articles in, 1,654,910	177
Metallic Composition and Process for Making Same, 1,686,277	530
Metallizing Process, 1,661,517	278
Metals, Joining, 1,655,273	177
Metals, Lithium-Containing Bearing, 1,652,077	133
Metals, Treatment of, 1,655,269	177
Metals with High-Temperature Fusing Points Such as Tungsten and of Preparing the Wire Therefrom, Process of Preparing, 1,650,631	88
*Mold for Casting Metals, and Method of Making Mold and Castings, 1,679,860-1,679,870 Inclusive	488
Mold for Making Metal Patterns by Electrodeposition, 1,665,062	323
Molten Magnesium, Protecting, 1,657,693	227

N

Nickel Alloys, Process of Producing, 1,674,438	408
Nickel-Beryllium Alloy, Process of Improving the Qualities of, 1,685,570	530

Nickel-Copper-Aluminum Alloys, Treatment of, 1,675,264	408
Nitrocellulose Lacquers, Composition for Removing, 1,660,387	364
*Non Ferrous Casting, 1,665,435	278

O

Oscillating Centrifugal Machine, 1,658,650	177
--	-----

P

Paint and Stains, Compound for Removing, 1,651,139	88
Paint and Varnish Remover, 1,657,323	227
Permanent Molds for Metal Casting, Composition for, 1,674,232	408
Pickling Machine, 1,664,428	323
*Plating Apparatus, 1,667,515	323
*Plating Apparatus and Product Thereof, 1,672,402	364
Platinum, Process for the Recovery of, 1,649,786	88
Polishing Metal Surfaces, Method of and Means for, 1,682,157	488
Pulverizing and Alloying Nickel, Method of, 1,680,825	488

R

Rare Metals and Alloys Thereof, Production of, 1,648,954	42
*Reclaiming Metals, Apparatus for, 1,679,385	488
Recuperative Furnace, 1,682,626	133
Refining Copper, Art of, 1,648,947	42
Refining Light Metals Such as Magnesium or Aluminum or Their Alloys and Recovering Such Metals from Scrap, Process of, 1,661,526	278
Refractory Material and Process of Producing the Same, 1,668,306	323
*Rotary Field Induction Furnace, 1,677,528	447
Rustproofing, 1,651,694	133
Rustproofing Material and Process of Making the Same, 1,660,661	278
Rust-Proofing Process, 1,654,716	177

S

Sand Mold for Casting Magnesium and Process of Making Same, 1,685,553	530
Silver Coating on Glass, Apparatus for Producing a, 1,648,504	42
Silvering and Beveling Small Mirrors, Process of, 1,664,300	323
*Smelting Furnace, 1,647,608	42
Solder, 1,651,709	133
Solder for Aluminum and Aluminum Alloys, 1,661,052	278
Solder, White-Gold, 1,652,740	133
Soldering Device, Automatic, 1,655,900	177
*Soldering Leading-In Wires to Lamp Bases, Method of, 1,676,949	447
Soldering Material, 1,663,141	323
*Spray Gun, 1,650,686	88
Submerged-Channel Induction Furnace, 1,684,504	530

T

*Tank, 1,678,770	447
Tapping Plug for Metallurgical Furnaces, 1,651,445	133
Tin and Arsenic Compounds, Process for Separating, 1,670,307	364
Tin Mixture from Lead and Tin Alloys, Process for Extracting, 1,669,580	364
*Tinning and Retinning Machine, 1,656,977	227
Tinning Articles, Method of, 1,653,255	133
Tinning Pot, 1,692,22	323

U

Uniting Metal Parts by Fusion, Method of and Furnace for, 1,659,550	227
---	-----

V

Varnish and Paint Removing Compound, 1,657,147	227
--	-----

W

*Waste Metal, Apparatus for Regenerating Bulky, 1,647,371	42
Welding Electrodes, 1,679,002	447
Welding Medium for Aluminum, 1,675,664	408
Welding of Copper and Copper Alloys, 1,680,844	488
Welding Rod, 1,681,904	530
Welding Rod, 1,679,003	488
Wiper for Coating Machines, 1,650,984	278

Z

Zinc-Base Alloy, 1,663,215	323
*Zinc Coating Ferrous Metal, Method of, 1,675,646	408
*Zinc, Process and Apparatus for Extracting, 1,652,184	133

EQUIPMENT**A**

*Abrasive-Band Grinder	90
Acid-Resisting Bricks	531
*Acid-Resisting Pumps, Rubber	450
Addition, Pickling Solution Agent	135
*Admic, Physical Properties of	43, 134
Agent Addition, Pickling Solution	135
Alcohol Metal Cleaner	279
*Airbrush, New Pressure Feed	410
Alloy, New Aluminum	411
Alloy, New Hard Aluminum	136
Aluminum Alloy, New	411
Aluminum Alloy, New Hard	136
Aluminum, Chromium Plate Applied	365
Aluminum, Chromium Plated on	409
Angle Cutting Hacksaw	409
*Anodes for Electroplating, Ball	366
Applied to Aluminum, Chromium Plate	365
*Artificial Draft, Exhausters for	279
*Atmospheres of Gas, Brazing in	280
*Automatic Grinder, New	135
Automatic Polishing Machines	280

B

*Ball Anodes for Electroplating	366
*Ball Bearing Grinder	135
*Band Grinder, Abrasive	90
Baths, Strength Tests for Pickling	451
Bearing Bronze	450
*Bearing Grinder, Ball	135
*Blast Machine, New Portable Sand	366
Bleeding, Tourniquet Stops	178
Brass Finishing, Dry Process for	366
*Brazing in Atmospheres of Gas	280
Bricks, Acid Resisting	531
Brighteners for Plating Solutions	490
Bronze, Bearing	450
*Bronze for Decorative Forgings	531
Bronze Welding, Demonstrations of Tobin	449
Brush Sections, New Scratch	135
*Buff, New Type of	326
*Buffer, Portable Grinder and	90
*Buffer, Portable Grinder and	533
*Building, Spray Cabinets on Outside of	324
Burner with Thermostat, Gas	492

C

*Cabinets on Outside of Building, Spray	324
*Cabinets, Ventilating Unit for Spray	531
Cases for Control Instruments, Die-Cast	533
*Casting Machine, Madison-Kipp Die	178
*Casting Metals by the Vacuum System	228
*Centrifugal Dryer	448
Chromic Compound Rack Covering	135
*Chromium Fumes, Exhaust System for	325
Chromium Fumes, Respirator for	449
Chromium Plate Applied to Aluminum	365
Chromium Plated on Aluminum	409
Chromium Plated Sheets	367
Chromium Plated Sheets	410
Chromium Plated Zinc Sheets	448
*Chromium Plating Controller	230
Chromium Plating, Generators for	326
*Chromium Plating, Motor-Generators for	366
*Chromium Plating, Motor Valve for	490
Chromium Polish, New	449
Cleaner, Alcohol Metal	279
Cloth, World's Finest Wire	280
CO ₂ Recorder, Electrical	451
*Colling Machines, Slitting and	365
*Combination Grinder, New	136
*Combination Ladle-Nozzle	324
Compound for Skin Diseases, New	178
Compound Rack Covering, Chromic	135
Control Instruments, Die-Cast Cases for	533
*Controller, Chromium Plating	230
*Converter for High Frequency Induction Furnaces, New	89
*Conveyor, New Overhead	325
Cooling Fan, New Type	449
Copper Plating Process, Fast	533
*Core Machine, Hinged Roll-Over	367
*Core Machine, New	90
*Core Ovens, Revolving	279
Course in Porcelain Enameling	324
Covering, Chromic Compound Rack	135
Cream, New Protective Hand	367
*Crowning Device, New Roll Grinder	44
*Cutter and Separator, Sand Mixer	179
Cutting Hacksaw, Angle	409
*Cylinders, Wooden Plating	282

D

*D. C. Motors, Quiet	324
*Decorative Forgings, Bronze for	531
Demon Rust, Fighting	410
Demonstrations of Tobin Bronze Welding	449
*Developed by General Electric Company, New Tool Material	532
*Device, New Roll Grinder Crowning	44
Die-Cast Cases for Control Instruments	533
*Die-Casting Machine, Madison-Kipp	178
*Disc Grinder, Horizontal	136
Diseases, New Compound for Skin	178
*Draft, Exhausters for Artificial	279
Dry Process for Brass Finishing	366
*Dryer, Centrifugal	448
*Drying Unit, Electric Mould	45

E

*Electric Furnaces, Large Gain in Use of.....	491
*Electric Heat Treating Furnace.....	449
*Electric Mould Drying Unit.....	45
*Electric Pot Furnaces.....	450
Electronic CO ₂ Recorder.....	451
*Electronic Tornado Process of Welding.....	230
*Electroplating, Ball Anodes for.....	366
*Electroplating, Rheostats for.....	281
*Electroplating Solutions, Immersion Heater for Enamelling, Course in Porcelain.....	89
Equipment Exhibit, Pangborn.....	324
Equipment, Spraying.....	179
*Exhaust System for Chromium Fumes.....	325
*Exhauster for Universal Use.....	281
*Exhausters for Artificial Draft.....	279
Exhibit at Exposition, Westinghouse to.....	450
Exhibit, Pangborn Equipment.....	179
Exposition, Westinghouse to Exhibit at.....	450

F

Fan, New Type Cooling.....	440
Fast Copper Plating Process.....	533
*Feed Airbrush, New Pressure.....	410
Fighting Demon Rust.....	410
Finest Wire Cloth, World's.....	280
Finishing, Dry Process for Brass.....	366
*Flint Foundry Sand.....	367
Fluids, Spray Gun for Heavy.....	136
*Forgings, Bronze for Decorative.....	531
*Foundry Sand, Flint.....	367
*Foundry Screen, Mobile.....	409
*Frequency Induction Furnaces, New Converter for High.....	89
*Fumes, Exhaust System for Chromium.....	325
Fumes, Respirator for Chromium.....	449
*Furnace, Electric Heat Treating.....	449
Furnace Lining, Refractory for.....	324
*Furnaces, Electric Pot.....	450
*Furnaces, Large Gain in Use of Electric.....	491
*Furnaces, New Converter for High Frequency Induction.....	89
*Furnaces, Soft Metal Melting.....	325
Fuse, New Type of Plug.....	492

G

*Gain in Use of Electric Furnaces, Large.....	491
*Gas, Brazing in Atmospheres of.....	280
Gas Burner with Thermostat.....	492
*General Electric Company, New Tool Material Developed by.....	532
Generators for Chromium Plating.....	326
*Generators for Chromium Plating, Motor.....	366
*Grinder, Abrasive-Band.....	89
*Grinder and Buffer, Portable.....	89
*Grinder and Buffer, Portable.....	533
*Grinder, Ball Bearing.....	135
*Grinder, Crown Grinding Device, New Roll.....	44
*Grinder, Horizontal Disc.....	136
*Grinder, New Automatic.....	135
*Grinder, New Combination.....	136
*Grinder, New High Speed.....	499
*Grinder, Universal Tool Post.....	137
*Grinders, Vertical Spindle.....	448
Gun for Heavy Fluids, Spray.....	136
*Gun, New Spray.....	44
*Gun, New Touch-Up Spray.....	281
Gun, Refractory Spray.....	410

H

Hacksaw, Angle Cutting.....	409
Hand Cream, New Protective.....	367
*Hand-Operated Spray-Painting Outfit.....	490
Hard Aluminum Alloy, New.....	136
*Heat Treating Furnace, Electric.....	449
*Heater for Electroplating Solutions, Immersion Heavy Fluids, Spray Gun for.....	89
*High Frequency Induction Furnaces, New Converter for.....	89
*High Speed Grinder, New.....	409
*Hinged Roll-Over Core Machine.....	367
*Horizontal Disc Grinder.....	136

I

*Immersion Heater for Electroplating Solutions.....	89
*Improved Slitting Machine.....	178
*Induction Furnaces, New Converter for High Frequency.....	89
Industrial Ovens.....	136
Instruments, Die-Cast Cases for Control.....	533
Insulation Tested, Oven.....	179

K

*Kipp Die-Casting Machine, Madison.....	178
---	-----

L

*Ladle-Nozzle, Combination.....	324
*Large Gain in Use of Electric Furnaces.....	491
*Line Polishing Machine, Straight-Lining, Refractory for Furnace.....	324

M

*Machine, Hinged Roll-Over Core.....	367
*Machine, Improved Slitting.....	178
*Machine, Madison-Kipp Die-Casting.....	178
*Machine, Multiple Molding.....	491
*Machine, New Core.....	90
Machine, New Polishing.....	44
*Machine, New Portable Sand Blast.....	366
*Machine, Straight-Line Polishing.....	229
*Machines, Automatic Polishing.....	280
*Machines, Slitting and Colling.....	365
Machines, Tabor Squeezing.....	229
*Madison-Kipp Die-Casting Machine.....	178
Making, Wood for Pattern.....	451
*Material Developed by General Electric Company, New Tool.....	532
*Melting Furnaces, Soft Metal.....	325
Metal Cleaner, Alcohol.....	279
*Metal Melting Furnaces, Soft.....	325
Metal Reclaiming Mill.....	365
*Metals by the Vacuum System, Casting.....	228
Mill, Metal Reclaiming.....	365
*Mixer, Cutter and Separator, Sand.....	179
*Mobile Foundry Screen.....	409
*Molding Machine, Multiple.....	491
*Motor Generators for Chromium Plating.....	366
*Motor Valve for Chromium Plating.....	490
*Motors, Quiet D. C.....	324
*Mould Drying Unit, Electric.....	45
*Multiple Molding Machine.....	491

N

New Aluminum Alloy.....	411
*New Automatic Grinder.....	135
*New Chromium Polish.....	449
*New Combination Grinder.....	136
*New Compound for Skin Diseases.....	178
*New Converter for High Frequency Induction Furnaces.....	89
*New Core Machine.....	90
*New Hard Aluminum Alloy.....	136
*New High Speed Grinder.....	409
*New Overhead Conveyor.....	325
New Polishing Machine.....	44
*New Portable Sand Blast Machine.....	366
*New Pressure Feed Airbrush.....	410
*New Protective Hand Cream.....	367
New Red Protective Paint.....	136
*New Roll Grinder Crown Grinding Device.....	44
New Scratch Brush Sections.....	135
New Solder Substitute.....	45
*New Spray Gun.....	44
New Testing Sieve.....	325
*New Tool Material Developed by General Electric Company.....	532
*New Touch-Up Spray Gun.....	281
*New Type Cooling Fan.....	449
*New Type of Buff.....	326
*New Type of Plug Fuse.....	492
Nickel Pellets.....	325
*Nozzle, Combination Ladle.....	324

O

*Operated Spray-Painting Outfit, Hand.....	490
*Outfit, Hand-Operated Spray-Painting.....	490
*Outside of Building, Spray Cabinets on.....	324
Oven Insulation Tested.....	179
Ovens, Industrial.....	136
*Ovens, Revolving Core.....	279
*Over Core Machine, Hinged Roll-Overhead Conveyor, New.....	367
	325

P

Paint, New Red Protective.....	136
*Painting Outfit, Hand-Operated Spray.....	490
Pangborn Equipment Exhibit.....	179
Pattern Making, Wood for.....	451
Pellets, Nickel.....	325
Pewter, Sheet.....	230
*Physical Properties of Admic.....	43
*Pickling Baths, Strength Tests for.....	451
Pickling Solution Agent Addition.....	135
Pickling Solutions, Test Set for.....	492
Plate Applied to Aluminum, Chromium.....	365
*Plated on Aluminum, Chromium.....	409
Plated Sheets, Chromium.....	367
Plated Sheets, Chromium.....	410
Plated Zinc Sheets, Chromium.....	448
*Plating Controller, Chromium.....	230
*Plating Cylinders, Wooden.....	282
Plating, Generators for Chromium.....	326
*Plating, Motor-Generators for Chromium.....	366
*Plating, Motor Valve for Chromium.....	490
Plating Process, Fast Copper.....	533
Plating Solutions, Brighteners for.....	490
Plug Fuse, New Type of.....	492
Polish, New Chromium.....	449
Polishing Machine, New.....	44
*Polishing Machine, Straight-Line.....	229
*Polishing Machines, Automatic.....	280
Porcelain Enamelling Course in.....	324
*Portable Grinder and Buffer.....	90
*Portable Grinder and Buffer.....	533
*Portable Sand Blast Machine, New.....	366
*Portable Tinning Pot.....	179
*Post Grinder, Universal Tool.....	137
*Pot Furnaces, Electric.....	450
*Pot, Portable Tinning.....	179
*Pressure Feed Airbrush, New.....	410
Process, Fast Copper Plating.....	533
Process for Brass Finishing, Dry.....	366

P

P

P

*Process of Welding, Electronic Tornado.....	230
*Properties of Admic, Physical.....	43
Protective Hand Cream, New.....	367
Protective Paint, New Red.....	136
*Pumps, Rubber Acid-Resisting.....	450

Q

*Quiet D. C. Motors.....	324
--------------------------	-----

R

Rack Covering, Chrome Compound.....	135
Reclaiming Mill, Metal.....	365
Recorder, Electrical CO ₂	451
Red Protective Paint, New.....	136
Refractory for Furnace Lining.....	324
Refractory Spray Gun.....	410
Resisting Bricks, Acid.....	531
*Resisting Pumps, Rubber Acid.....	450
Respirator for Chromium Fumes.....	449
*Revolving Core Ovens.....	279
*Rheostats for Electroplating.....	281
*Roll Grinder Crown Grinding Device, New.....	44
*Roll Over Core Machine, Hinged.....	367
*Rubber Acid-Resisting Pumps.....	450
Rust, Fighting Demon.....	410

S

*Sand Blast Machine, New Portable.....	366
*Sand, Flint Foundry.....	367
*Sand Mixer, Cutter and Separator.....	179
Scale, Solder Testing.....	365
Scratch Brush Sections, New.....	135
*Screen, Mobile Foundry.....	409
Sections, New Scratch Brush.....	135
*Separator, Sand Mixer, Cutter and.....	179
Set for Pickling Solutions, Test.....	492
Sheet Pewter.....	230
Sheets, Chromium Plated.....	367
Sheets, Chromium Plated.....	410
Sheets, Chromium Plated Zinc.....	448
Sieve, New Testing.....	325
*Silver Solders, The Use of.....	489
Skin Diseases, New Compound.....	178
*Slitting and Colling Machines.....	365
*Slitting Machine, Improved.....	178
*Soft Metal Melting Furnaces.....	325
Solder Substitute, New.....	45
Solder Testing Scale.....	365
*Solders, The Use of Silver.....	489
Solution Agent Addition, Pickling.....	135
Solutions, Brighteners for Plating.....	490
*Solutions, Immersion Heater for Electroplating.....	89
Solutions, Test Set for Pickling.....	492
*Speed Grinder, New High.....	409
*Spindle Grinders, Vertical.....	448
*Spray Cabinets on Outside of Building.....	324
*Spray Cabinets, Ventilating Unit for.....	531
Spray Gun for Heavy Fluids.....	136
*Spray Gun, New.....	44
*Spray Gun, New Touch-Up.....	281
Spray Gun, Refractory.....	410
*Spray-Painting Outfit, Hand-Operated.....	490
Spraying Equipment.....	533
Squeezing Machines, Tabor.....	229
Stops Bleeding, Tourniquet.....	178
*Straight-Line Polishing Machine.....	229
*Strength Tests for Pickling Baths.....	451
Substitute, New Solder.....	45
*System, Casting Metals by the Vacuum.....	228
*System for Chromium Fumes, Exhaust.....	325

T

Tabor Squeezing Machines.....	229
Telephotograph, Words Sent by.....	531
Test Set for Pickling Solutions.....	492
Tested, Oven Insulation.....	179
Testing Scale, Solder.....	365
Testing Sieve, New.....	325
*Tests for Pickling Baths, Strength.....	451
Thermostat, Gas Burner with.....	492
*Tinning Pot, Portable.....	179
Tobin Bronze Welding, Demonstrations of.....	449
*Tool Post Grinder, Universal.....	137
*Tool Material Developed by General Electric Company, New.....	532
*Tornado Process of Welding, Electronic.....	230
*Touch-Up Spray Gun, New.....	281
Tourniquet Stops Bleeding.....	178
*Treating Furnace, Electric Heat.....	449
Type Cooling Fan, New.....	449
*Type of Buff, New.....	326
Type of Plug Fuse, New.....	492

U

*Unit, Electric Mold Drying.....	45
*Unit for Spray Cabinets, Ventilating.....	531
*Universal Tool Post Grinder.....	137
*Universal Use, Exhauster for.....	281
*Use, Exhauster for Universal.....	281
*Use of Electric Furnaces, Large Gain in.....	491
*Use of Silver Solders, The.....	489

V

*Vacuum System, Casting Metals by the.....	228
*Valve for Chromium Plating, Motor.....	490
*Ventilating Unit for Spray Cabinets.....	531
*Vertical Spindle Grinders.....	448

W

Welding, Demonstrations of Tobin Bronze	449
*Welding, Electronic Tornado Process of	230
Westinghouse to Exhibit at Exposition	450
Wire Cloth, World's Finest	280
Wood for Pattern Making	451
*Wooden Plating Cylinders	282
Words Sent by Telephotograph	534
World's Finest Wire Cloth	280

Z

Zinc Sheets, Chromium Plated	448
------------------------------------	-----

EQUIPMENT FIRMS

A

Ajax Electrothermic Corporation, Trenton, N. J., *Large Gain in Use of Electric Furnaces	491
Ajax Electrothermic Corporation, Trenton, N. J., *New Converter for High Frequency Induction Furnaces	89
Alpha-Lux Company, Inc., 192 Front Street, New York, Refractory for Furnace Lining ..	324
American Brass Company, Waterbury, Conn., *Bronze for Decorative Forgings	531
American Brass Company, Waterbury, Conn., Demonstrations of Tobin Bronze Welding ..	449
American Chemical Paint Company, Ambler, Pa., Pickling Solution Agent Addition	135
American Foundry Equipment Company, Mishawaka, Ind., *New Core Machine	90
American Machine and Foundry Company, New York, New Solder Substitute	45
American Nickeloid Company, Peru, Ill., Chromium Plated Sheets	410
American Telephone and Telegraph Company, New York, Words Sent by Telephotograph ..	534
Apollo Metal Works, La Salle, Ill., Chromium Plated Sheets	367
Apollo Metal Works, La Salle, Ill., Chromium Plated Zinc Sheets	448
Apothecaries Hall Company, Waterbury, Conn., Alcohol Metal Cleaner	279
Armstrong Cork and Insulation Company, Pittsburgh, Pa., Oven Insulation Tested	179
Atlantic Machine and Tool Company, 28 Canfield Street, Orange, N. J., *Universal Tool Post Grinder	137
Atlas Plating Works, Inc., 277 E. 156th Street, Cleveland, Ohio., Chromium Plated on Aluminum	409

B

Belke Manufacturing Company, Chicago, Ill., Chrome Compound Rack Covering	135
B. H. G. Specialty Company, Dayton, Ohio., *Wooden Plating Cylinders	282
Bingham Pump Company, Portland, Oregon, *Rubber-Acid-Resisting Pumps	450
Black and Decker Manufacturing Company, Towson, Md., *New Combination Grinder ..	136
Bogue Electric Company, Charles J., 132 King Street, New York, Generators for Chromium Plating	326
Brown Instrument Company, Philadelphia, Pa., Die-Cast Cases for Control Instruments	533

C

Century Electric Company, St. Louis, Mo., *Quiet D. C. Motors	324
Chicago Eye Shield Company, 2300 Warren Avenue, Chicago, Ill., Respirator for Chromium Fumes	449
Clarage Fan Company, Kalamazoo, Mich., *Exhauster for Universal Use	281
Cleveland Blow Pipe and Manufacturing Company, Cleveland, Ohio., *Exhaust System for Chromium Fumes	325
Coale Lumber Company, Thomas E., Philadelphia, Pa., Wood for Pattern Making	451
Coppus Engineering Corporation, Worcester, Mass., New Type Cooling Fan	449

D

Delster Concentrator Company, Fort Wayne, Ind., *Mobile Foundry Screen	409
Dellinger, A. M., 723 North Prince Street, Lancaster, Pa., *Centrifugal Dryer	448
DeVilbiss Company, Toledo, Ohio., *Hand-Operated Spray-Painting Outfit	490
DeVilbiss Company, Toledo, Ohio., *New Spray Gun	44
Divine Brothers Company, Utica, N. Y., *Automatic Polishing Machines	280
Dixon Crucible Company, Joseph, Jersey City, N. J., *Combination Ladle-Nozzle	324

E

Eager Electric Company, Watertown, N. Y., *Motor-Generators for Chromium Plating ..	366
---	-----

F

Farrel Foundry and Machine Company, Ansonia, Conn., *New Roll Grinder Crowning Device ..	44
Ferro Enameling Company, Cleveland, Ohio., Course in Porcelain Enameling	324
Foxboro Company, Inc., Foxboro, Mass., *Chromium Plating Controller	230
Fredericksen Company, Saginaw, Mich., Bearing Bronze	450

G

General Ceramics Company, 30 Church Street, New York, *Exhausters for Artificial Draft ..	279
General Electric Company, Schenectady, N. Y., *Brazing in Atmospheres of Gas	280
General Electric Company, Schenectady, N. Y., *Electric Mould Drying Unit	45
General Electric Company, Schenectady, N. Y., *Immersion Heater for Electroplating Solutions	80
General Electric Company, Schenectady, N. Y., New Protective Hand Cream	367
General Electric Company, Schenectady, N. Y., New Red Protective Paint	136
General Electric Company, Schenectady, N. Y., *New Tool Material Developed by General Electric Company	532
General Electric Company, Schenectady, N. Y., *Portable Tinning Pot	179
General Refractories Company, Philadelphia, Pa., Acid-Resisting Bricks	531
Grand Rapids Blow Pipe and Dust Arrester Company, Grand Rapids, Mich., *Spray Cabinets on Outside of Building	324

H

Handy and Harmon, 57 William Street, New York City, *The Use of Silver Solders	489
Hanson-Van Winkle-Munning Company, Matawan, N. J., *Rheostats for Electroplating ..	281
Hanson-Van Winkle-Munning Company, Matawan, N. J., *Straight-Line Polishing Machine ..	229
Hisey-Wolf Machine Company, Cincinnati, Ohio., Portable Grinder and Buffer	90
Hisey-Wolf Machine Company, Cincinnati, Ohio., *Portable Grinder and Buffer	533
Hisey-Wolf Machine Company, Cincinnati, Ohio., *Vertical Spindle Grinders	448
Hoyt Metal Company, St. Louis, Mo., Sheet Pewter	230

I

Ideal Tourniquet Company, Baltimore, Md., Tourniquet Stops Bleeding	178
Industrial Metal Company, 2900 E. Cumberland Street, Philadelphia, Pa., Solder Testing Scale	365

J

J-B Engineering Sales Company, New Haven, Conn., Angle Cutting Hack Saw	409
Johnson Gas Appliance Company, Cedar Rapids, Iowa, Gas Burner with Thermostat	492

L

Lasalco, Inc., St. Louis, Mo., New Chromium Polish	449
Lea Manufacturing Company, Waterbury, Conn., Dry Process for Brass Finishing	366
Lincoln Electric Company, Cleveland, Ohio., *Electronic Tornado Process of Welding ..	230
Louden Machinery Company, Fairfield, Iowa., *New Overhead Conveyor	325

M

Madison-Kipp Corporation, Madison, Wis., *Madison-Kipp Die Casting Machine	178
Metal Finishers' Machine Company, 4001 W. 25th Street, Cleveland, Ohio., New Polishing Machine	44
Milburn Company, Alexander, Baltimore, Md., New Touch-Up Spray Gun	281
Monarch Engineering and Manufacturing Company, Baltimore, Md., *Revolving Core Ovens ..	279
Monarch Engineering and Mfg. Company, Baltimore, Md., *Sand Mixer, Cutter and Separator	179
Monarch Engineering and Manufacturing Company, Baltimore, Md., *Soft Metal Melting Furnaces	325
Mond Nickel Company, Pittsburgh, Pa., Nickel Pellets	325

N

National Chromium Corporation, 200 Varick Street, New York, Chromium Plate Applied to Aluminum	365
Newark Wire Cloth Company, 351-365 Verona Avenue, Newark, N. J., New Testing Sieve ..	325
Newark Wire Cloth Company, Newark, N. J., World's Finest Wire Cloth	280

O

Obermayer Company, S., Chicago, Ill., Refractory Spray Gun	410
--	-----

P

Paasche Airbrush Company, Chicago, Ill., *New Pressure Feed Airbrush	410
Paasche Airbrush Company, Chicago, Ill., *Ventilating Unit for Spray Cabinets	531
Pangborn Corporation, Hagerstown, Md., Pangborn Equipment Exhibit	179
Pettinos, George F., 1206 Locust Street, Philadelphia, Pa., *Flint Foundry Sand	367
Porter-Cable Machine Company, Syracuse, N. Y., *Horizontal Disc Grinder	136

Q

Quigley Furnace Specialties Company, New York, Spray Gun for Heavy Fluids	136
---	-----

R

Research Manufacturing Company, Dept. M., Oak Lane, Philadelphia, Pa., Test Set for Pickling Solutions	492
Rogers and Company, Samuel O., Buffalo, N. Y., *New Automatic Grinder	135
Ruemelin Manufacturing Company, Minneapolis, Minn., *New Portable Sand Blast Machine ..	366

S

St. Louis Motor Valve Company, St. Louis, Mo., *Motor Valve for Chromium Plating	490
Scovill Manufacturing Company, Waterbury, Conn., *Physical Properties of Admic	43
Sentry Company, Taunton, Mass., *Electric Pot Furnaces	450
Sheet Aluminum Corporation, Jackson, Mich., New Aluminum Alloy	411
Societe Anonyme pour l'Industrie des Metaux, Lausanne, France, New Hard Aluminum Alloy	136
Specialty Manufacturing Company, Cleveland, Ohio., New Scratch Brush Sections	135
Spray-Lac Manufacturing Company, Chicago, Ill., Spraying Equipment	533
Standard Electrical Tool Company, Cincinnati, Ohio., *Ball Bearing Grinder	135
Standard Equipment Company, Inc., New Haven, Conn., Metal Reclaiming Mill	365
Standard Process Corporation, Chicago, Ill., Fast Copper Plating Process	533

T

Tabor Manufacturing Company, Philadelphia, Pa., *Hinged Roll-Over Core Machine	367
Tabor Manufacturing Company, 6225 Tacony Street, Philadelphia, Pa., *Multiple Molding Machine	491
Tabor Manufacturing Company, Philadelphia, Pa., Tabor Squeezing Machines	229
Teggo Manufacturing Company, 1755 North Troy Street, Chicago, Ill., New Compound for Skin Diseases	178
Thermo Electro Instrument Company, Irvington, N. J., Industrial Ovens	136
Torrington Manufacturing Company, Torrington, Conn., *Improved Slitting Machine	178
Torrington Manufacturing Company, Torrington, Conn., *Slitting and Colling Machines ..	365
Trent Company, Harold E., Philadelphia, Pa., *Electric Heat Treating Furnace	449
Trico Manufacturing Company, Milwaukee, Wis., New Type of Plug Fuse	492

U

Udylite Process Company, Detroit, Mich., *Ball Anodes for Electroplating	366
Uehling Instrument Company, Paterson, N. J., Electrical Co. Recorder	451
United States Electrical Tool Company, Cincinnati, Ohio., *New High Speed Grinder ..	409

V

Vacuum Casting Company, Toledo, Ohio., *Casting Metals by the Vacuum System ..	228
--	-----

W

Walls Sales Corporation, New York, *Abrasive Band Grinder	90
Wambaugh Company, E. Goshen, Ind., Brighteners for Plating Solutions	490
Weaver Bros. Company, Clinton, Mich., *Strength Tests for Pickling Baths	451
Westinghouse Electric and Manufacturing Company, E. Pittsburgh, Pa., Westinghouse to Exhibit at Exposition	450

Y

Yerges Manufacturing Company, Fremont, Ohio., *New Type of Buff	326
---	-----

